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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/629,820 | 07/30/2003 | Takuya Homme | 046124-5023-02 | 7298 |

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EXAMINER

GAGLIARDI, ALBERT J

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2878

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AKC

| | | | |
|------------------------------|--|-------------------------------------|--|
| Office Action Summary | Application No. 10/629,820 | Applicant(s) HOMME ET AL. | |
| | Examiner Albert J. Gagliardi | Art Unit 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>7/30, 9/03, 1/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The status of the priority applications, including any patent numbers, in the first paragraph of the specification should be updated.

Appropriate correction is required.

Claim Objections

2. Claims 3-6 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The examiner notes that claim 1 requires the scintillator to be "formed on" a first side of the substrate, yet claim 3, as recited, implies that the scintillator is formed on the reflecting material. As such the claims are not more limiting but are, in actuality, alternative elements.

Claim Rejections - 35 USC § 103

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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4. Claims 1-2 and 7-14 are rejected under 35 U.S.C. 103(a) as being obvious over *Tsuchino et al.* (US 4,825,085) in view of *Egert* (US 5,654,084).

Regarding claim 1, *Tsuchino* discloses (Figs. 1a-h) a scintillator panel comprising: a multi-sided substrate (1) made of carbon as a major constituent (col. 3, line 62 to col. 4, line 9); a scintillator (2) formed on a first side of the substrate, the scintillator covering a substantial portion of the first side of the substrate (see generally Figs. 1a-d and f-h); and a protective film substantially covering at least all exposed surfaces of the scintillator.

Regarding the protective film covering the substrate including the second side of the substrate, *Tsuchino* also discloses (Fig. 1e) at least one embodiment wherein the protective film also covers the substrate including the second side of the substrate. *Tsuchino* further discloses that scintillator panel should not be limited to the example disclosed in Figs. 1a-h (col. 3, lines 49-50). Therefore, absent some degree of criticality, it would have been obvious to a person of ordinary skill in the art to modify the one of the embodiments of Fig. 1a-d, for example, by forming the protective layer to cover the substrate including the second side of the substrate as suggested in Fig. 1e. In addition, the examiner notes that *Egert* teaches methods of forming protective coverings for objects (substrates) wherein the object is "completely encased" (col. 2, lines 52-56) by methods such as by a deposition process wherein the whole object is placed in a deposition chamber (col. 3, lines 42-56). It will be observed by one skilled in the art, that in such methods, coating the whole object would be easier than coating only a part of the object. Therefore, absent some degree of criticality, one skilled in the art would have considered it an obvious design choice to coat the whole object (i.e., an object such as disclosed by *Tsuchino* in Figs. 1a-d) since such a deposition process would have been easier.

Regarding claim 2, *Tsuchino* discloses that the substrate may comprise carbon powder or carbon fibers for example. Those skilled in the art appreciate that at least one well-known form of carbon powder is graphite (compressed carbon powder), which would have been an obvious if not inherent design choice. In addition, those skilled in the art further appreciate that carbon materials such as graphite and a-carbon are well known in the art and, absent some degree of criticality, would have been an obvious design choice. Those skilled in the art appreciate that carbon based materials such as graphite and a-carbon are also well known for being optically opaque and radiation transparent, and as such are considered an obvious design choice for use as a substrate in radiation sensitive scintillator panels where such properties are desired.

Regarding claims 7-12, *Tsuchino* discloses (Figs. 1a-d, f-h and Fig. 2) that the scintillator panel includes multiple portions of the first side substrate uncovered by the scintillator.

Regarding claims 13-14, in the apparatus suggested by *Tsuchino* and Egert as applied above, the protective film covers at least part or entire surfaces of the substrate.

5. Claims 3-6 and 15 are rejected under 35 U.S.C. 103(a) as being obvious over *Tsuchino* and *Egert* as applied above and further in view of *Kingsley et al.* (US 5,153,438).

Regarding claims 3-6 *Kingsley* further discloses that the use of an additional layer such as a reflecting film (26) between the scintillator (30) and the substrate (20). Those skilled in the art appreciate that such reflecting layers improve light collection efficiency.

Regarding claim 15, *Kingsley* further discloses that it is well known to form a radiation image sensor by placing a scintillator in opposition to an image sensing element (see generally Fig. 1).

Conclusion


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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert J. Gagliardi whose telephone number is (571) 272-2436. The examiner can normally be reached on Monday thru Friday from 9 AM to 5 PM.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Albert J. Gagliardi
Primary Examiner
Art Unit 2878

AJG